

**REMARKS****INTRODUCTION**

In view of the foregoing, claims 1-3, 7, 9, and 10 have been amended. No new matter has been entered and reconsideration of the allowability of the pending claims is respectfully requested.

Claims 1-10 are pending and under consideration.

**IMPROPER CITATION TO UNKNOWN REFERENCE IN OFFICE ACTION**

The differing rejections of claims 1-8 are stated in the Office Action as relying on a Aoyama et al., citing U.S. Patent No. 5,161,040. However no such Aoyama et al. reference is believed to have been previously cited. Rather, previously and in the current rejection of claim 10, the Office Action has cited Yokoyama, U.S. Patent No. 5,161,040.

The outstanding Office Action is unclear and does not clarify which reference is being relied upon in rejecting the claims.

In addition, though the cited patent number is the same and a portion of the name, e.g., "aoyama" of "yokoyama", would appear similar, the Office Action citations to Aoyama et al. would appear counter to the conclusion that the cited Aoyama et al. was meant to be the cited Yokoyama.

For example, on page 3, the Office Action cites FIG. 3 of Aoyama et al. as disclosing "mounting an optical pickup on a movable base (fig. 3)." However, FIGS. 3A-3B of Yokoyama are graphs and not an illustration of a mounted optical pickup.

Accordingly, it is believed that the Office Action is in error. The Office Action citation to Aoyama et al. is either in error or the Office Action has improperly identified the same.

Below, applicants have referenced Yokoyama, rather than Aoyama et al., as this reference corresponds to the Office Action cited patent number. However, again, applicants believe that this citation may be in error.

If the citation to Aoyama et al. is in error, or the Office Action has failed to properly identify Aoyama et al. to applicants, applicants respectfully request a new Office Action clarifying how the pending claims are being rejected.

Issuance of a new Office Action is respectfully requested.

## ENTRY OF AMENDMENT

Entry of the above amendments to the claims is respectfully requested. It is respectfully submitted that these amendments should not raise substantively new issues or require a further search, but rather amend the claims to be consistent with the detailed description and as inherently understood after a review of known systems in the art.

As noted, the above amendments merely clarify the claimed invention as describing improvements over a system with a second type of optical module.

Example known optical module types include:

(1) a first type, where the optical module includes a front photo-detector and a light source manufactured within a sealed example metal housing, e.g., the below-mentioned Noda et al., such that when the optical pickup is manufactured the arrangement of the front photo-detector and the light source within the optical module are set regardless of where the optical module is later placed within the optical pickup (or other optical system) during the manufacture of the optical pickup; and

(2) a second type, where an optical module housing, as the optical module, and a separate front photo-detector for use in an optical pickup are manufactured separately, requiring the arrangement of the front photo-detector separate from the optical module housing within the optical pickup during the manufacture of the optical pickup.

There are conventional business and technological reasons for such different types of optical modules, e.g., some ultimate systems that may use an optical module may not need or desire such a front photo-detector, and the addition of the front photo-detector to such an optical module will be wasteful or add additional unneeded expenses.

Thus, there are at least two distinct known types of optical modules, the above types (1) and (2).

With this understanding of the conventional optical module types, the detailed specification clearly identifies the present invention as explaining available improvements over the second type (2) arrangement.

Paragraph [0006] of the Background of the present specification states:

As described above, optical elements of an optical system are installed on a pickup base which moves in a radial direction of an optical disc. When an optical pickup is manufactured, it is necessary to adjust locations of the optical elements and angles among them when installing the optical elements. In other words, the

installation locations and angles for the optical elements must be precisely adjusted to focus the light beam emitted from the light source 1 as a light spot of a predetermined size on a predetermined portion of the optical disc 10.

Similarly, paragraph [0007] of the Background further recites:

The FPD 8 should always be located relative to the light source 1 to precisely adjust the light power of the light source 1 to a predetermined level, so that the light power detected by the FPD 8 is proportional to the light power of the light source 1. However, as described above, when the locations of the light source 1 and the FPD 8 are separately adjusted, the locations of light source 1 and the FPD 8 may vary when an optical pickup is manufactured. In this case, the relationship between the light power of the light source 1 and the light power detected by the FPD 8 may vary when an optical pickup is manufactured. Thus, it is quite difficult to adjust the light power of the light source 1 to a predetermined level. Accordingly, whenever the location and angle of the light source 1 are adjusted, the location and angle of the FPD 8 must be adjusted. As a result, the cost of manufacturing an optical pickup may increase.

Paragraphs [0027]-[0028] of the Detailed Description further reemphasize:

The FPD 160 may serve to detect light power from the parallel beam which passes through the collimating lens 121. In the conventional optical pickup, as shown in FIG. 1, the beam splitter 5 is needed to diverge a portion from the parallel beam before the parallel beam is incident on the objective lens 9. Also, the FPD 8 is installed in the rear of the beam splitter 5. In this case, the beam splitter 5 must be coated so as to transmit a predetermined amount of light toward the FPD 8. Thus, it is difficult to coat the beam splitter 5. In addition, since the light source 1 is distant from the FPD 8, it is not easy to incorporate the light source 1 and the FPD 8 into an assembly.

However, in this embodiment of the present invention, the FPD 160 is installed between the optical module 101 and the collimating lens 121 so as to detect a portion of the divergent beam. Thus, the beam splitter 5 as shown in FIG. 1 is not necessary.

Thereafter, paragraphs [0032]-[0033] of the Detailed Description recite:

In the conventional optical pickup, the location of the light source 1 is adjusted, and then the location of the FPD 8 is adjusted to the location of the light source 1. Thus, the relative locations of the light source 1 and the FPD 8 may slightly vary according to a process of manufacturing an optical pickup. Therefore, it is difficult to accurately calculate the light power of the light source 1 from the light power detected by the FPD 8. In particular, it is quite difficult to detect light power from a divergent beam.

In the optical pickup according to the present invention, the relative locations of the optical module 101 and the FPD 160 are constant. Thus, the light power of

the optical module 101 can be accurately calculated from the light power detected by the FPD 160. As a result, the light power of the optical module 101 can be precisely adjusted.

Thus, the detailed specification of the present application already identified the present invention as setting forth improvements over the aforementioned second type (2) optical module arrangement. The Background describes this second type optical module type arrangement, **again which inherently has a housed optical module separate from a front photo-detector**, explains the problems thereof, and the Detailed Description further clarifies that embodiments of the present invention overcome these drawbacks. In addition, based upon the above explanation of this known different type arrangement and the disclosure of Noda et al., as an example of the first type (1) optical module, the disclosure of the presently claimed invention should now be better understood.

Again, with such an arrangement, differently from the type (1) optical module, embodiments of the present invention set forth an arrangement for improving the type (2) optical module arrangement for use in such an optical pickup arrangement and then for placing that type (2) optical module within a holder when manufacturing the optical module pickup, for example, for permit for an easier and more consistent arranging of the optical module/front photo-detector set within the holder within the optical pickup.

Thus, it is respectfully submitted that the above amendments to the independent claims merely restate features set forth by the present specification, i.e., these features are inherent in the detailed description as being based on an improvement over such second type (2) optical module arrangements, and in view of the above discussion of the known two types of conventional optical modules, such description must carry over to the reasonable interpretation of the pending claims. For example, see *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321.

As stated in *Phillips*,

Thus, the claims "must be read in view of the specification, of which they are a part." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 [34 USPQ2d 1321] (Fed. Cir. 1995) (en banc). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 [48 USPQ2d 1117] (Fed. Cir. 1998)). In addition to the written description, "the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim

scope narrower than it would otherwise be." *Id.* at 1317.

Accordingly, it is respectfully submitted that the above amendments to the claims do not add new matter, raise new issues, or substantively or substantially change the scope of the pending claims beyond the scope already set forth by the detailed description and as understood under a reasonable interpretation of the claims.

Entry of these amendments is respectfully requested.

## REJECTIONS

Claim 9 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Noda et al., U.S. Patent No. 5,600,621; claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being obvious over Noda et al., apparently in view of Yokoyama, U.S. Patent No. 5,161,040; claim 3 stand rejected under 35 U.S.C. § 103(a) as being obvious over Noda et al., apparently in view of Yokoyama, and further in view of Ophey, U.S. Patent No. 5,500,846; claims 4-8 stand rejected under 35 U.S.C. § 103(a) as being obvious over Noda et al., apparently in view of Yokoyama, and further in view of Takahashi, U.S. Patent No. 5,991,255; and claim 10 stands rejected under 35 U.S.C. § 103(a) as being obvious over Noda et al., in view of Yokoyama. These rejections are respectfully traversed.

By way of review and as only an example, claim 1 sets forth:

"[a]n optical pickup mounted on a pickup base moving relative to an optical recording medium and used to record information on and/or reproduce information from the optical recording medium, the optical pickup comprising:

    a first optical module, as a housing with a light source;  
an objective lens to focus a first light beam emitted from the first optical module on the optical recording medium;

    a first front photo-detector to monitor power of the first light beam emitted from the first optical module toward optical components to irradiate the optical recording medium;

    a first collimating lens between the first optical module and the objective lens to transform the first light beam into a parallel beam; and

    a holder adjustably installed on the pickup base, wherein the first optical module and the first front photo-detector are coupled to the holder such that the first front photo-detector is arranged a predetermined distance from the first optical module during an adjusting of the holder to locate the first optical module at the focus of the first collimating lens."

As noted above, Noda et al. falls with the afore-mentioned first optical module type, with the front photo-detector for the optical pickup being manufactured within the optical module housing. Conversely, as noted above, independent claims of the present invention set forth that

the front photo-detector used in the claimed optical pickup is separate from any optical module type that may be used as the optical module.

It is respectfully submitted that none of Noda et al., Yokoyama, Ophey, nor Takahashi, alone or in combination, disclose or suggest the presently claimed arrangement.

Accordingly, withdrawal of these rejections and allowability of the present application is respectfully requested.

#### CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

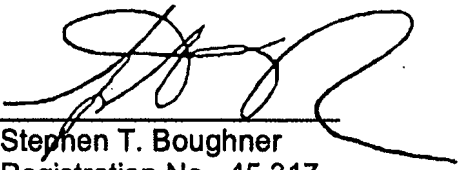
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: August 13, 2007

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